Corporate Taxation, New Economic Geography Factors and Industry Location: An Empirical Investigation for the European Union

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Abstract:

European integration brought with it deeper economic integration and the increase in the intra-EU mobility of firms, inducing the intensification of competition for firms among EU members. In recent years, this intensified competition is also reflected by an increased European tax competition – the trend towards undercutting tax rates in order to attract firms from other EU locations. In this paper, we investigate empirically, with a panel data model for the whole EU area, the factors that explain industry location within the EU. More specifically, our approach is to examine the determinants that account for the observed differences in firm attraction (as indicated by FDI inflows) across the member states. We thereby shed light on the underlying factors and assess the relative importance of the determinants emphasized by the traditional tax competition literature vis-à-vis the factors associated with the emerging New Economic Geography (NEG) literature. Interestingly, the results indicate that differences in the tax policy (proxied by nominal and effective corporate tax rates), which are considered to be an important factor in the traditional tax competition scenario, among the EU countries are not important as a deterministic factor and do not explain the observed differences in the inward FDI across the member states. On the other hand, some factors emphasized by the NEG, such as differences in market size, differences in the degree of access and integration with international markets, and differences in the country's peripherality, seem to be important determinants and account for the observed differences in industry location across the EU countries.

JEL Classification: C23; F15; F21; F23; H25; H73

1. INTRODUCTION

The successive steps of European integration – particularly the completion of the single European market in 1992 and the establishment of the EMU in 1999 – brought with it deeper economic integration and the increase in the intra-EU mobility of firms, inducing an intensification of competition for firms within the European Union and a rising mobility and migration of national capital tax bases across the member states. These developments implied that the tax policies (with regard to corporate taxation) of the member countries would become more interdependent and create fiscal externalities, affecting thus a broad range of the members' national economic policies and the location of economic activities within the EU. It is a fact that this intensified competition for capital among EU countries is increasingly in recent years also reflected by an intensified European tax competition – the trend towards undercutting tax rates in order to attract firms from other EU locations.

Thus the question that arises, which can be characterized as highly policy relevant for the EU context, is whether corporate tax differentials across member countries are indeed effective in attracting capital and explain the observed differences in firm attraction across the EU members, as the traditional tax competition literature implies[1], or whether other factors, such as those emphasized by the emerging New Economic Geography (NEG) literature (e.g. Krugman, 1991a,b, Krugman and Venables, 1995a,b, Fujita, Krugman, and Venables, 1999)[2], are more important and play a decisive role for industry location. More recently, using the theoretical framework of the NEG, the models of Baldwin and Krugman (2004), Andersson and Forslid (1999), and Ludema and Wooton (1997), which explicitly analyze international corporate taxation issues and their effects on industry location, point out that tax differentials are counterbalanced by other factors and mechanisms that are important for agglomeration and that a "race to the bottom" of tax rates (as the conventional tax competition models predict) must not necessarily take place.

In this paper, we conduct an econometric investigation of the factors that explain the differences in the firm attraction (as indicated by inward FDI differences) across the member states, by constructing and estimating a panel data model for each EU-15

[1] This literature has its origins from the so-called basic tax competition models of Zodrow and Mieszkowski (1986) and Wilson (1986). For an excellent presentation and review of the theoretical tax competition literature see for instance Wilson (1999).

[2] This literature of the NEG framework has been initiated by Krugman's (1991a,b) pioneering work. For a good overview of the theoretical framework of the NEG see for instance Ottaviano and Puga (1998), Fujita, Krugman, and Venables (1999), and Neary (2001).

country. We thereby shed some light on the underlying factors and assess the relative importance of the determinants emphasized by the traditional tax competition literature vis-à-vis the factors associated with the NEG literature. The remainder of the paper is organized as follows. Section 2 describes the econometric methodology. Section 3 presents the empirical results. Finally, Section 4 summarizes the most important findings and concludes.

2. ECONOMETRIC METHODOLOGY

Since the aim of our econometric investigation is to examine and determine the factors that account for the observed differences in firm attraction across the member states, we construct an empirical model for each EU country that considers the observed differences in various variables (deterministic factors of industry location and firm attraction) between each member country with all other members and relate these differences with the observed differences in the attraction of firms between the EU members in our sample. We take as a measure of firm attraction (dependent variable) the Foreign Direct Investment (FDI) inflows, which represent a standard measure in the empirical-econometric literature for analyses of industry location and firm attraction (see for instance, Benassy-Quere et al., 2000, Gropp and Kostial, 2000, 2001, Devereux and Griffith, 2002, Haufler and Stowhase, 2003).

As regards the explanatory variables, the main interest of our econometric analysis lies in the tax policy differences (corporate tax rate) as well as in various factors emphasized by the NEG framework. However, in order to take into account also other factors and have no omitted-variables bias problems with our econometric specification, we also include other independent variables which are considered to be important deterministic factors and function as control variables. Thus, the factors considered in the empirical analysis include: 1) the corporate tax rate (which has a predominant importance in the traditional tax competition literature), 2) the degree of access and integration with international markets (openness indicator), 3) the size of the home market, 4) the degree of the country's peripherality (all of which are emphasized by the NEG literature), 5) the cost of labour, and 6) the extent of a country's macroeconomic stability.

Following the arguments of the tax competition literature and conventional economic wisdom, the corporate tax rate is considered to exert a negative influence on firm attraction. By contrast, the size of the home market, which is proxied by GDP, exerts

a positive effect on industry location, as emphasized by the relevant theoretical literature (e.g. Krugman, 1980, 1991a,b) and empirical literature (e.g. Benassy-Quere et al., 2004, Gropp and Kostial, 2000). This variable is an important factor of FDI attraction, especially of the market-seeking FDI. In addition, the market size is an important factor for the attraction of firms which exhibit large scale economies in the production process (the home-market effect – production concentrates and takes place in the large market in order to realise economies of scale and minimize transport and trade costs (Krugman, 1980, 1981, Helpman and Krugman, 1985, Benassy-Quere et al., 2004), while it also plays an equally crucial role in the analytical framework of the NEG, where market size is endogenous and can induce circular processes of agglomeration (Krugman, 1991a,b, Krugman and Venables, 1995a,b, Fujita, Krugman, and Venables, 1999).

Given that an extraordinary open country to the international economy is likely to receive much more trade and FDI flows and that in many circumstances trade and FDI are complements, where the existence of the former increases the volume of the latter (see for instance, Markusen, 1998, Fontagne, 1999), the degree of access and integration of a country with international markets, which is proxied by the relative importance of total trade in the home economy – trade-GDP ratio (Benassy-Quere et al., 2000, Gropp and Kostial, 2000), is expected to be positively related to the volume of FDI inflows. Furthermore, the above openness indicator reflects the country's extent of access to large international markets, which is a factor emphasized by the NEG framework and constitutes an important determinant as regards a location's attractiveness. The last deterministic factor associated with the NEG in our econometric analysis is the degree of the country's peripherality within a country group (here the EU), which indicates the economic potential of a country (location) and is proxied by the Peripherality index of Keeble *et al.* (1988). The extent of a country's peripherality is expected to exert a negative effect on the attraction of firms in that country.

Regarding the last two factors considered in our analysis, the cost of labour in a country, which is proxied by the unit labour cost, is expected to exert a negative effect on inward FDI, while the extent of a country's macroeconomic stability is considered to be a factor that favours the attraction of FDI. Following the approach of Benassy-Quere et al. (2000) and Gropp and Kostial (2000), we use price stability (inflation rate over time) as a proxy of macroeconomic stability. Thus, our proxy for

macroeconomic stability s expected to be negatively correlated with the dependent variable, as a high inflation rate indicates macroeconomic instability, which exerts a negative effect on inward FDI.

For each of the country models as well as for the EU model, all of the above variables (dependent and independent) enter the regression in the form of bilateral differences between EU country *i* and *j*. We follow this approach, since with our econometric analysis we aim at the investigation of the factors that explain the observed differences in firm attraction across the EU countries in order to examine whether these differences are explained by differences in the tax policy or by the differences in other factors, such as those associated with the NEG framework and some other more general determinants.

Thus, each of the country models to be estimated has the following specification:

$$\begin{aligned}\left|FDI_i - FDI_j\right|_t = \beta_0 &+ \beta_1\left|TAX_i - TAX_j\right|_t + \beta_2\left|OPEN_i - OPEN_j\right|_t \\ &+ \beta_3\left|MARKET_i - MARKET_j\right|_t + \beta_4\left|PERIPH_i - PERIPH_j\right|_t \\ &+ \beta_5\left|LABCOST_i - LABCOST_j\right|_t + \beta_6\left|MSTAB_i - MSTAB_j\right|_t + u_{ijt}\end{aligned}$$

or alternatively

$$\begin{aligned}FDIDIF_{ijt} = \beta_0 &+ \beta_1 TAXDIF_{ijt} + \beta_2 OPENDIF_{ijt} + \beta_3 MARKETDIF_{ijt} + \beta_4 PERIPHDIF_{ijt} \\ &+ \beta_5 LABCOSTDIF_{ijt} + \beta_6 MSTABDIF_{ijt} + u_{ijt}\end{aligned} \quad (1)$$

where *i* is the country for which the econometric model is conducted and *j* refers for each of the other member countries. In each of the country models *i* refers always to the member state under consideration. The exact definitions of all variables as well as the data sources are presented in Table 1. For instance, in the regression for Austria the dependent variable is the absolute difference between the FDI inflows of Austria (FDI_i) and the FDI inflows of each other remaining EU member state (FDI_j), in year *t*. The explanatory variables are defined exactly in the same way and all country models are constructed in the same way.

Table 1: Definitions and data sources of the variables

Variable	Description and Data Source
$FDIDIF_{ijt}$	The absolute difference in the FDI inflows between country *i* and *j*. FDI inflows refer to total FDI inflows (all sectors) and are expressed in all EU countries in US dollars. *Data Source:* United Nations FDI/TNCs Database and UNCTAD (1996, 2000, 2004).
$TAXDIF_{ijt}$	The absolute difference in the nominal (statutory) corporate tax rate between country *i* and *j*. The nominal corporate tax rate is expressed as a percentage in all EU countries. *Data Source:* Lanoo and Levin (2002), Eggert and Genser (2004).
$EFTAXDIF_{ijt}$	The absolute difference in the average effective corporate tax rate between country *i* and *j*. The average effective corporate tax rate is expressed as a percentage in all EU countries. Effective corporate tax rates have been calculated under a number of assumptions. See Devereux and Griffith (2003) for methodology, definitions, and assumptions for calculating effective corporate tax rates. *Data Source:* Updated taxation database of M. Devereux and R. Griffith (available at IFS) of the data used in Devereux, Griffith and Klemm (2002).
$OPENDIF_{ijt}$	The absolute difference in the openness indicator between country *i* and *j*. The openness index is calculated as follows: $OPEN = \left(\frac{X + M}{GDP} \right) \cdot 100$ where *X* represent total exports, *M* are total imports, and *GDP* is Gross Domestic Product. Exports, imports and GDP in all EU countries are in US dollars. The final resulting variable $OPENDIF_{ijt}$ is expressed as the absolute difference of the above percentage (index). *Data Source:* United Nations COMTRADE Database and United Nations National Accounts Main Aggregates Database.
$MARKETDIF_{ijt}$	The absolute difference in the GDP between country *i* and *j*. In all EU countries GDP is in US dollars. *Data Source:* United Nations National Accounts Main Aggregates Database.
$PERIPHDIF_{ijt}$	The absolute difference in the Keeble *et al.* (1988) Peripherality index between country *i* and *j*. *Data Source:* Author's calculations of peripherality indices based on CEPII's Geographical and Distance Database and United Nations National Accounts Main Aggregates Database.
$LABCOSTDIF_{ijt}$	The absolute difference in the unit labor cost between country *i* and *j*. The unit labor cost is an index, defined as ratio of compensation per employee to real GDP per person employed. *Data Source:* European Commission (2004).
$MSTABDIF_{ijt}$	The absolute difference in the inflation rate between country *i* and *j*. *Data Source:* EUROSTAT, Economy and Finance Statistics.

All explanatory variables are expected to exhibit a positive sign, as small bilateral differences in the corporate tax rate and in the other factors between the country under investigation (*i*) and the other countries (*j*) are expected to relate with small bilateral differences in inward FDI (between *i* and *j*), whilst large bilateral differences in the explanatory variables are expected to relate with large bilateral differences in firm attraction between the country under investigation (*i*) and the other countries (*j*).

Because there are no separate data for the member countries Belgium and Luxembourg for a number of variables, but only combined data for these countries (as Belgium-Luxembourg Economic Union)[3], we have 13 EU partner countries (*j*) and thus 13 country pairs for each of the 14 country regressions, that is 13 observations in each year. We consider the years 1980, 1985, 1990, 1994, 1997, 1999, 2001, 2002 and 2003, for which data for all variables and countries are available.

Hence, each of our 14 EU member country models has a panel data structure with 117 observations. Since there are strong temporal effects in most variables of our sample and unobserved country-specific effects surely play a significant role in the context of our econometric model, we estimate a fixed-effects panel data model for each of the 14 EU members in our sample, taking into account and controlling for country-specific and time-specific effects.

Finally, for the tax policy variable we use to alternative measures. The first one is the nominal (statutory) corporate tax rate, while the second measure refers to the (average) effective corporate tax rate, for which the empirical literature finds to be more appropriate for empirical analyses. Since both measures of tax policy are important, we estimate two panel data models for each of the 14 EU countries. Thus, the second model is specified as follows:

$$FDIDIF_{ijt} = \beta_0 + \beta_1 EFTAXDIF_{ijt} + \beta_2 OPENDIF_{ijt} + \beta_3 MARKETDIF_{ijt} + \beta_4 PERIPHDIF_{ijt} + \beta_5 LABCOSTDIF_{ijt} + \beta_6 MSTABDIF_{ijt} + u_{ijt} \quad (2)$$

[3] For some data that are available for each of these countries separately, we have combined these data to form combined variables (that is, variables for Belgium-Luxembourg) in order to be able to construct and estimate the regression model for Belgium-Luxembourg.

3. EMPIRICAL RESULTS AND DISCUSSION

Table 2 reports the regression results for the 14 EU countries with the nominal corporate tax rate as the tax policy variable (estimation of equation (1)), whilst in Table 3 the results with the effective corporate tax rates are presented (estimation of equation (2)). As it is evident from Table 2, the *TAXDIF* variable in almost all country models is not statistically significant. In fact, only in the regression for Ireland the tax policy differences variable is significant at the 10% level, indicating that the observed differences of inward FDI between Ireland and the other member states can be (partly) explained by or attributed to the differences in the statutory corporate tax rate between Ireland and the other EU countries, together with the other deterministic factors.

It is interesting to note that in some country models (Finland, Germany, Italy, Netherlands, Spain) the *TAXDIF* variable exhibits an unexpected negative sign, suggesting that as the bilateral tax differences between the above countries and the other EU members increase, the bilateral inward FDI differences decrease. Clearly, the results of the country models with the nominal tax rates indicate that the tax differentials have no significant effect on the firm attraction, as proxied by the inward FDI differences, with the exception of Ireland, which exhibits very large tax differences with the other members due to the exceptionally low tax rate of that country.

On the other hand, in all country models the explanatory variables associated with the NEG framework have a significant effect on the observed FDI differences, suggesting that differences in the firm attraction can be attributed to differences in the degree of openness (or alternatively access and integration with international markets), differences in the size of the home market, and differences in the degree of the country's peripherality. Indeed, the variables *OPENDIF*, *MARKETDIF*, and *PERIPHDIF* are highly statistically significant in almost all country regressions, with *OPENDIF* and *PERIPHDIF* exerting the strongest effect and being relatively the most important factors for the observed inward FDI differences, as evidenced by the high standardized regression coefficients.

Table 2: Factors of industry location explaining the observed differences in firm attraction across the EU countries (with nominal tax rates)

	TAXDIF	*OPENDIF*	*MARKETDIF*	*PERIPHDIF*	*LABCOSTDIF*	*MSTABDIF*	R^2	F-test	N
Austria	0,102 (0,280)	0,603 (0,001)	0,129 (0,087)	0,689 (0,003)	0,012 (0,979)	0,363 (0,001)	0,693	7,806 (0,000)	117
Bel-Lux	0,049 (0,196)	0,254 (0,066)	0,232 (0,002)	0,090 (0,138)	0,036 (0,481)	0,087 (0,055)	0,957	77,101 (0,000)	117
Denmark	0,055 (0,545)	1,065 (0,000)	0,386 (0,053)	0,733 (0,002)	-0,036 (0,755)	0,288 (0,003)	0,720	8,907 (0,000)	117
Finland	-0,032 (0,724)	0,637 (0,000)	0,238 (0,117)	0,850 (0,000)	-0,142 (0,262)	0,134 (0,103)	0,701	8,598 (0,000)	117
France	0,038 (0,624)	0,887 (0,000)	0,171 (0,091)	0,244 (0,058)	-0,079 (0,398)	0,029 (0,262)	0,828	16,670 (0,000)	117
Germany	-0,028 (0,773)	0,951 (0,000)	0,287 (0,116)	0,493 (0,031)	-0,155 (0,305)	0,080 (0,139)	0,692	7,763 (0,000)	117
Greece	0,071 (0,486)	0,976 (0,000)	0,525 (0,005)	1,094 (0,000)	0,257 (0,136)	0,013 (0,945)	0.745	10,137 (0,000)	117
Ireland	0,081 (0,101)	0,366 (0,050)	-0,063 (0,802)	0,532 (0,053)	0,110 (0,429)	0,067 (0,471)	0,602	5,225 (0,000)	117
Italy	-0,047 (0,708)	1,026 (0,000)	-0,199 (0,365)	0,846 (0,000)	0,196 (0,139)	0,004 (0,976)	0,667	6,938 (0,000)	117
Netherlands	-0,009 (0,932)	0,436 (0,000)	0,377 (0,077)	-0,210 (0,576)	0,030 (0,861)	-0,065 (0,612)	0,679	7,315 (0,000)	117
Portugal	0,103 (0,283)	0,625 (0,001)	0,436 (0,024)	1,135 (0,000)	0,171 (0,276)	0,173 (0,238)	0,732	9,467 (0,000)	117
Spain	-0,010 (0,926)	1,053 (0,000)	0,490 (0,048)	0,975 (0,000)	0,283 (0,042)	0,014 (0,880)	0,673	7,129 (0,000)	117
Sweden	0,042 (0,659)	0,887 (0,000)	0,220 (0,126)	0,751 (0,002)	0,008 (0,942)	0,097 (0,361)	0,658	6,674 (0,000)	117
UK	0,021 (0,833)	0,881 (0,000)	0,063 (0,137)	0,266 (0,089)	-0,086 (0,383)	0,125 (0,100)	0,713	8,584 (0,000)	117

Notes: Results for the constant are not shown. P-values in parentheses. Standardized regression coefficients are reported. The standardized coefficients (also known as Beta coefficients) indicate the magnitude of the impact of an independent variable on the dependent variable, and thus show the relative importance of various explanatory variables of the model. More specifically, the standardized regression coefficients show how many standard deviations the dependent variable moves on average when the independent variable moves one standard deviation.

Table 3: Factors of industry location explaining the observed differences in firm attraction across the EU countries (with effective tax rates)

	EFTAXDIF	***OPENDIF***	***MARKETDIF***	***PERIPHDIF***	***LABCOSTDIF***	***MSTABDIF***	**R^2**	**F-test**	**N**
Austria	0,153 (0,091)	0,589 (0,001)	0,092 (0,098)	0,619 (0,007)	-0,007 (0,963)	0,299 (0,008)	0,708	8,414 (0,000)	117
Bel-Lux	0,115 (0,010)	0,232 (0,096)	0,229 (0,003)	0,114 (0,078)	0,027 (0,621)	0,098 (0,093)	0,956	75,738 (0,000)	117
Denmark	0,166 (0,070)	1,068 (0,000)	0,314 (0,088)	0,688 (0,003)	-0,063 (0,584)	0,278 (0,004)	0,730	9,316 (0,000)	117
Finland	0,108 (0,092)	0,631 (0,000)	0,253 (0,010)	0,844 (0,000)	-0,127 (0,342)	0,138 (0,098)	0,717	8,588 (0,000)	117
France	0,041 (0,584)	0,899 (0,000)	0,183 (0,059)	0,239 (0,073)	-0,086 (0,371)	0,136 (0,094)	0,829	16,633 (0,000)	117
Germany	-0,032 (0,783)	0,943 (0,000)	0,299 (0,010)	0,494 (0,030)	-0,155 (0,310)	0,089 (0,099)	0,694	7,762 (0,000)	117
Greece	0,104 (0,256)	0,955 (0,000)	0,495 (0,008)	1,073 (0,000)	0,258 (0,128)	0,042 (0,818)	0,751	10,260 (0,000)	117
Ireland	0,260 (0,052)	0,360 (0,049)	-0,211 (0,429)	0,716 (0,092)	0,157 (0,101)	0,030 (0,760)	0,677	7,162 (0,000)	117
Italy	0,136 (0,101)	0,985 (0,000)	-0,096 (0,676)	0,716 (0,005)	0,174 (0,183)	-0,030 (0,809)	0,684	7,162 (0,000)	117
Netherlands	0,013 (0,907)	0,433 (0,000)	-0,375 (0,080)	-0,215 (0,571)	0,031 (0,858)	-0,061 (0,639)	0,679	7,316 (0,000)	117
Portugal	0,245 (0,093)	0,626 (0,000)	0,447 (0,020)	1,202 (0,000)	0,180 (0,246)	0,189 (0,188)	0,737	9,711 (0,000)	117
Spain	-0,018 (0,860)	1,050 (0,000)	0,501 (0,050)	0,989 (0,000)	0,283 (0,041)	0,016 (0,867)	0,673	7,131 (0,000)	117
Sweden	0,163 (0,096)	0,994 (0,000)	0,345 (0,069)	0,733 (0,003)	0,027 (0,839)	0,105 (0,317)	0,689	7,696 (0,000)	117
UK	0,102 (0,099)	0,888 (0,000)	0,115 (0,082)	0,290 (0,080)	-0,080 (0,410)	0,134 (0,096)	0,741	10,046 (0,000)	117

Notes: Results for the constant are not shown. P-values in parentheses. Standardized regression coefficients are reported. The standardized coefficients (also known as Beta coefficients) indicate the magnitude of the impact of an independent variable on the dependent variable, and thus show the relative importance of various explanatory variables of the model. More specifically, the standardized regression coefficients show how many standard deviations the dependent variable moves on average when the independent variable moves one standard deviation.

As regards the last two explanatory variables, labour cost differences across EU members seem to have no significant effects on industry location, as in all country regressions the *LABCOSTDIF* variable yields a non-significant coefficient, whilst macroeconomic stability differences seem to be to some extent an important factor of firm attraction and explain the inward FDI differences across the member states for some EU countries, since the *MSTABDIF* variable in some country models (Austria, Belgium-Luxembourg, Denmark, Finland, UK) is statistically significant.

Turning to the empirical results of Table 3 with the effective tax rate differences, it is evident that the regression models produce more significant results and show a slight increase in the models' overall explanatory power. More specifically, the bilateral corporate tax differences (effective tax rates) across the member states seem to be a deterministic factor of the observed differences in firm attraction across the EU countries, since in most country models the *EFTAXDIF* variable exerts a statistically significant effect on the inward FDI differences. Only in the regressions of France, Germany, Greece, Netherlands, and Spain the effective corporate tax differences with the other EU countries do not explain the observed inward FDI differences between the above countries and their EU partner countries.

As in the first model (equation (1)), all of our three explanatory variables, that are associated and account for some features and factors emphasized by the NEG, are highly statistically significant in almost all country models, suggesting clearly that openness (*OPENDIF*), market size (*MARKETDIF*), and peripherality differences (*PERIPHDIF*) between the EU countries determine and explain differences in firm attraction across the member states. Again, unit labour cost differences (*LABCOSTDIF*) do not seem to constitute a deterministic factor of firm attraction, except in the regressions of Spain and Ireland, while in Austria, Belgium-Luxembourg, Denmark, Finland, France, Germany, and the UK macroeconomic stability differences (*MSTABDIF*) with the other member countries seem to have a statistically significant effect on the differences in firm attraction which are observed between those countries and all their EU partners.

As regards the relative importance of the models' explanatory variables, it is evident that in most country regressions (Belgium-Luxembourg, Denmark, France, Germany, Italy, Netherlands, Spain, Sweden, and the UK) the differences in the degree of access and integration with international markets (*OPENDIF*) between the above countries and their EU partners is the most important factor of the observed bilateral differences

in inward FDI., with the second and third most important factor being the differences in the peripherality (*PERIPHDIF*) and the differences in market size (*MARKETDIF*), respectively. For Austria, Finland, Greece, Ireland, and Portugal (countries that can be characterized as peripheral, especially the three last countries) the variable that exerts the strongest and most significant effect on the differences in firm attraction between those countries and the other member states is the peripherality differences variable (*PERIPHDIF*), followed by the *OPENDIF* and *MARKETDIF* variables.

On the other hand, in almost all country regressions bilateral corporate tax rate differences exert the least or one of the least important effects on firm attraction differences across EU members, though the *EFTAXDIF* variable is statistically significant in most models. This means that although there is a statistically significant effect of the tax policy differences on observed inward FDI differences (and thus of the corporate taxation on firm attraction), this effect is relatively weak compared to the other factors of the country models. Hence, our econometric analysis suggests that corporate tax differences across EU countries are not a very strong and decisive factor of firm attraction (as the traditional tax competition literature would suggest) compared to some other factors emphasized by the NEG literature.

4. CONCLUSIONS

In this paper, an empirical panel data model for each EU-15 country has been constructed and estimated in order to investigate the factors that account for the observed differences in firm attraction across the EU countries. The main focus of our examination have been the tax policy differences across the member states as well as the differences in some basic country-specific features and factors emphasized by the NEG framework. Although our econometric investigation is not an explicit test of the traditional tax competition theory and the NEG theory, it provides a test of the predictions and an assessment of the relative importance of the determinants associated with the traditional tax competition literature vis-à-vis the factors associated with the theoretical framework of the NEG.

Using two alternative measures of corporate taxation, namely nominal (statutory) and effective corporate tax rates, our analysis revealed that effective tax rates produce better results and correspond closer to the basic tax competition view. However, even the effective tax rate differentials have been found to be a much less important factor of the observed firm attraction (inward FDI) differences across EU countries

compared to the explanatory variables that have been included in the models to capture some basic features and factors of the NEG. We found that differences in the degree of a country's openness and integration with international markets, differences in the home market size, and differences in the degree of a country's peripherality are important factors and explain the observed inward FDI differences across member states. Thus, our empirical results in the case of the EU-15 do not support the traditional tax competition scenario, where corporate taxation plays a decisive role and where the tax differentials across countries (especially if large) are associated with large differences in the attraction of capital (firms).

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